(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 6 May 2005 (06.05.2005)

PCT

(10) International Publication Number WO 2005/041163 A1

(51) International Patent Classification7:

G09G 3/34

(21) International Application Number:

PCT/IB2004/052057

(22) International Filing Date: 12 October 2004 (12.10.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03103952.2

24 October 2003 (24.10.2003) EP

(71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

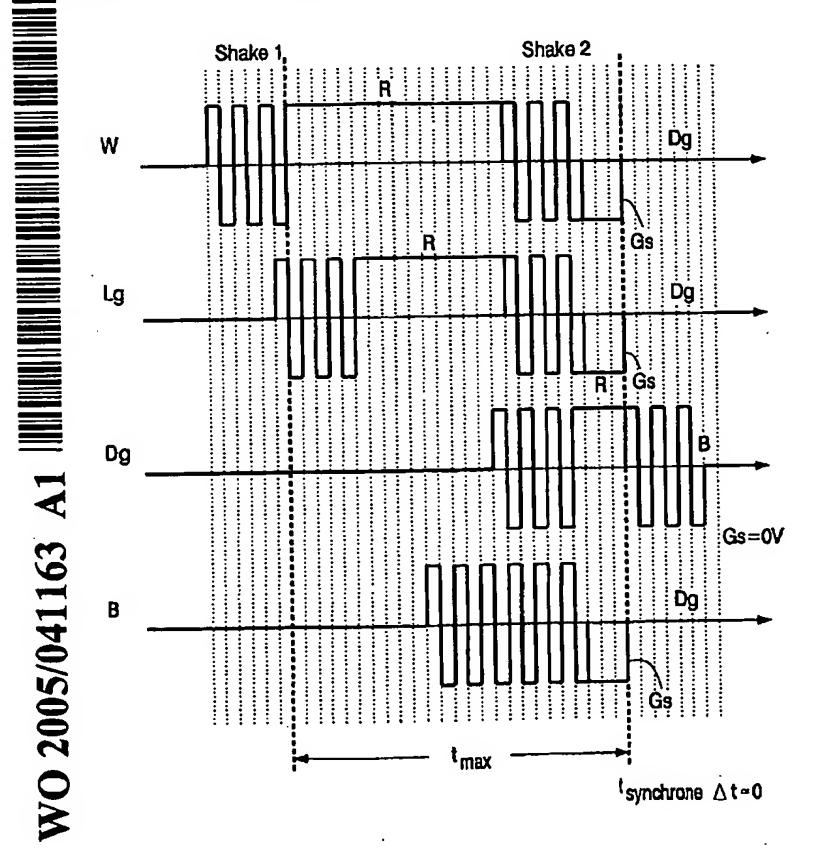
(75) Inventors/Applicants (for US only): JOHNSON, Mark,

T. [GB/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). ZHOU, Guofu [NL/NL]; c/o Prof. Holstlaan 6. NL-5656 AA Eindhoven (NL).

- (74) Agent: ROLFES, Johannes, G., A.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: ELECTROPHORETIC DISPLAY DEVICE



An electrophoretic display (57) Abstract: device is driven by application driving waveforms comprising application of various potential differences (R, Gs, P) to bring about a change in image. In the display and method in accordance with the invention the duration of the time period (Δt) in which the end of the transition of one image to another for various waveforms occurs is less than 37.5 % of the maximum time period of the waveform (Δ <0.375 t_{max}), and preferably the end of the waveforms are is synchronized in time (Δ =0), i.e. the end of all waveforms occur at the same instance (t_{synchrone}).